

Reply to Office Action of December 31, 2009

AMENDMENTS TO THE ABSTRACT OF THE DISCLOSURE

Please substitute the Abstract of the Disclosure with the attached Abstract. The following changes have been made to the Abstract:

~~A method of the invention produces a porous film by casting a polymer solution containing a polymer onto a substrate to form a film, and subjecting the film to phase conversion to thereby form a porous film. In the method, the polymer constituting the porous film has a surface tension S_a [mN/m], the substrate has a surface tension S_b [mN/m], and S_a and S_b satisfy the following condition: $S_a - S_b \geq 10$. This method can produce a porous film having a high rate of hole area at its surfaces and having homogenous micropores from the surfaces to the core thereof. A porous film of the invention is a porous film having a large number of continuous micropores. The film has a thickness of 5 to 200 μm , has an average surface pore size A of 0.01 to 10 μm , [[and]] an average surface porosity rate of surface hole area C_s and has an average inside pore size B and an average inside porosity rate of inside hole area D_s inside thereof, in which the The ratio A/B of A to B is 0.3 to 3, and the ratio C/D of C to D is 0.7 to 1.5. The porous film is produced by casting a polymer solution containing a polymer onto a substrate to form a film and subjecting the film to phase conversion to thereby form a porous film. In the method, the polymer constituting the porous film has a surface tension S_a [mN/m], the substrate has a surface tension S_b [mN/m], and S_a and S_b satisfy the following condition: $S_a - S_b \geq 10$.~~